

- 7 -

What is Claimed:

1. A method of protecting humans exposed to sunlight against photoaging and sunburn comprising topically applying to skin of a human a composition comprising caffeine or a
5 compound structurally similar to caffeine in an amount effective to protect the skin against photoaging and sunburn.
2. The method of claim 1 wherein the composition comprises caffeine, theophylline or theobromine.
3. The method of claim 1 wherein the composition is
10 applied prior to exposure of the skin to sunlight.
4. The method of claim 1 wherein the composition is applied subsequent to exposure of the skin to sunlight.
5. A method of protecting individuals with a heightened sensitivity to the sun from damage resulting from
15 the sun comprising topically applying to the skin of an individual with a heightened sensitivity to the sun a composition comprising caffeine or a compound structurally similar to caffeine prior to exposure of the individual to the sun.
- 20 6. The method of claim 5 wherein the composition comprises caffeine, theophylline or theobromine.
7. A pharmaceutical composition for prevention of photoaging and sunburn comprising caffeine or a compound structurally similar to caffeine and a second sunscreen or
25 free radical scavenger.